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[54] PHOTOCATALYTIC DEVICE AND DEVICE APPLYING THE SAME

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[51] Int. Cl.⁶ B01J03502 ; A61L00210; A61L00920; B01D05386; B01J02106; C02F00132; C03C01723; H01L03300**[57] ABSTRACT**

PURPOSE: To obtain a photocatalytic device utilizing a photocatalytic reaction with a photocatalyst for purifying and sterilizing air and water as a compact structure applicable even to a place not exposed to sunbeams, a narrow place, etc., consuming small electric power and emitting chromatic light.

CONSTITUTION: This photocatalytic device has a substrate 1 with a photocatalytically reactive surface formed by carrying a photocatalyst 2 made of a thin titanium dioxide film and a light emitting diode disposed so that it can illuminate the photocatalyst 2 and chiefly radiating prescribed visible light and UV rays of 360-400nm wavelength. Since the diode 3 is used as a UV source for activating the photocatalyst 2, the entire device can be made compact. This device is put to practical use as a deodorizing device, a drinking water purifier, an antibacterial device with an antibacterial surface, etc.
